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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,986	01/09/2002	Derrick John Page	Page-5	3924

7590 08/19/2003  
Hung Chang Lin  
8 Schindler Ct.  
Silver Spring, MD 20903

EXAMINER

CRUZ, MAGDA

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/041,986	PAGE, DERRICK JOHN	
	Examiner	Art Unit	
	Magda Cruz	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 8-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: element 52. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
  - a. The phrase "wherein said flexible surface is air" renders the claim to be indefinite. The applicant is respectfully requested to clarify said phrase, since the

air, by definition, is a mixture of invisible odorless tasteless gases (as nitrogen and oxygen) that surrounds the earth. Therefore, the air cannot be a surface.

(*Merriam-Webster's Collegiate Dictionary*, Tenth Edition (1999), p. 25)

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-7 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gates.

Gates (US Patent Number 4,005,932) discloses a reconfigurable surface (32), comprising: a flexible surface (column 5, line 24); and a matrix of rods (40A) for contouring said flexible surface (32) to a desired shape (column 5, lines 24-27-30); wherein said flexible surface (32) is supported by the tips of said rods (Figure 5). Each rod (40) of said rods is movable in a vertical direction against said flexible surface (32) and is locked in position when elevated to a predetermined position (column 5, lines 34-45); wherein said flexible surface (32) is sucked against said tips (column 5, lines 48-54). Each rod (40A) of said rods is fitted with pneumatically controlled locks (56), which release a particular rod to move freely by coincident addressing (column 6, lines 16-18). The pneumatically controlled locks (56) comprise a first lock for X-coordinate (34) and a second lock for Y-coordinate (i.e. pneumatic valves); further comprising a second

Art Unit: 2851

configurable surface to clamp against said configurable surface to serve as a mold for casting molten material (column 8, lines 44-61). The reconfigurable surface (32) serves as a contour map and/or an image projection system (column 2, lines 28-31), further comprising geographical features (column 2, lines 32-36) optically projected from a projector (column 5, lines 4-5) onto said flexible surface (32).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gates as applied to claims 1-3, 5-7 and 16-20 above, and further in view of Monroe et al.

Gates (US Patent Number 4,005,932) teaches the salient features of the present invention, except a reconfigurable surface wherein the predetermined position is controlled by a computer, and computer means to correct the offset of horizontal positioning of said features due to the topology of said flexible surface. However, Gates discloses means for controlling the reconfigurable surface (column 5, lines 24-27).

Monroe et al. (US Patent Number 5,159,362) discloses a reconfigurable surface (13) wherein the predetermined position is controlled by a computer (83), and computer

Art Unit: 2851

means to correct the offset of horizontal positioning of said features due to the topology of said flexible surface (column 10, lines 7-17).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the computer means disclosed by Monroe et al. in substitution of the means for controlling the reconfigurable surface from Gates invention, for the purpose of having a dimensional transformation system that engages a three-dimensional object with an elastic screen to provide special effects (column 4, lines 10-13).

***Allowable Subject Matter***

9. Claim 8-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not teach a reconfigurable surface, comprising in combination with the additionally recited elements, a chamber for housing said rods and evacuated for creating a suction to suck said flexible surface against said tips of said rods; an elevator, on which rest the bottom ends of said rods which are unlocked; further comprising inflatable tubes to serve as brakes to lock the rods in position when inflated, where said tubes are aligned in two orthogonal directions.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hogan (US Patent Number 5,793,918) discloses a movable 3D display comprising an optic fiber adjustment assembly that controllably moves the distal ends of the optic fibers away from and toward the image projector thus forming a moving three-dimensional relief image.

O'Keefe (US Patent Number 3,400,478) teaches a composite character display device comprising control means for controlling the positions of the display elements between each of said positions whereby the display elements may be made to a desired character to be visibly defined.

Fleming (US Patent Number 4,536,980) shows a screen comprising pin heads positioned at varying attitudes relative to the aperture plate, or upon the moving pin heads, providing the appearance of visually animated action and dynamically changing displays.

Fleming (US Patent Number 4,654,989) discloses a vertical three-dimensional image screen.


Laskowski et al. (US Patent Number 5,796,620) teaches a casting system which utilizes a conventional CAD/CAM software to automatically position the rods of a pin mold to replicate, by the rod end surfaces, the surface contours of an object drawn on a CAD machine when the object is cast in the pin mold.

Vollom (US Patent Number 6,298,587 B1) shows a multiple orientation three-dimensional image screen.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (703)308-6367. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703)308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.

  
RUSS ADAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

Magda Cruz  
Patent Examiner  
August 14, 2003